

WHAT IS CLAIMED IS:

1. A noise canceling circuit comprising:

a low-pass filter for eliminating a high-frequency component contained in an input signal;

an amplifying unit which outputs a signal at either high or low level in response to an output of the low-pass filter that is larger or smaller than a threshold level;

a pulse generating circuit for outputting a pulse signal at a point of time when an output level of the amplifying unit is changed; and

a pulling-in circuit for receiving the pulse signal output from the pulse generating circuit, and forcibly pulling the output of the low-pass filter in the high level or the low level.

2. The noise canceling circuit according to claim 1, wherein the pulling-in circuit includes a first transistor interposed between the output of the low-pass filter and a terminal for the high level and a second transistor interposed between the output of the low-pass filter and a terminal for the low level, and

an output of the pulse generating circuit is supplied to control terminals of the first and second transistors.

3. The noise canceling circuit according to claim 1, wherein the pulse generating circuit includes a delay circuit for

delaying an output of the amplifying unit, an inverting circuit for inverting the output of the amplifying unit, an AND circuit for calculating a logical product between the delay circuit and the inverting circuit, and an OR circuit for calculating a logical sum between the delay circuit and the inverting circuit.

4. The noise canceling circuit according to claim 2, wherein the pulse generating circuit includes a delay circuit for delaying an output of the amplifying unit, an inverting circuit for inverting the output of the amplifying unit, an AND circuit for calculating a logical product between the delay circuit and the inverting circuit, and an OR circuit for calculating a logical sum between the delay circuit and the inverting circuit.

5. The noise canceling circuit according to claim 1, wherein the amplifying unit includes a Schmidt circuit.

6. The noise canceling circuit according to claim 2, wherein the amplifying unit includes a Schmidt circuit.

7. The noise canceling circuit according to claim 3, wherein the amplifying unit includes a Schmidt circuit.

8. The noise canceling circuit according to claim 4, wherein the amplifying unit includes a Schmidt circuit.